

Initially, Applicants' attorney affirms the prior election of claims 1-30. Applicants intend to file a divisional application with claims 31-43.

Enclosed herewith is a Supplemental Information Disclosure Statement with the article to Azuma (1997).

The documents in the names of Knoll, G.F. et al. (i.e. Knoll and McGregor, 1993) and Rocheleau et al (i.e. Rocheleau and Crane, 1991) are prior art.

The undersigned knows of no English abstract or equivalent English translation for the Hecht document.

The article entitled "Geometrically Weighted Semiconductor Frisch Grid Radiation Spectrometers" does not appear to be prior art.

X Applicants' attorney respectfully submits that the citations in the specification contain enough bibliographical information when considered in combination with the Information Disclosure Statements. For example, the reference to McGregor and Rojeski (1999) is clearly the article entitled "Performance of CdZnTe Geometrically Weighted Semiconductor Frisch Grid Radiation Detectors" cited on the Information Disclosure Statement. *7/8 not prior art*

Figure 5 is prior art and is designated as prior art as indicated in the marked up drawing in red attached hereto.

The title of the application has been amended.

With respect to the Examiner's rejection of claim 26 under 35 U.S.C. § 112, second paragraph, "the detector subsystem has stereoscopic capabilities". As noted on lines 10 and 11 of the Abstract, "a pair of spaced gamma-ray cameras of a detector subsystem function like "gamma eyes". In this way, the detector system may have stereoscopic

capabilities. However, other mechanisms may be employed to insure that the detector subsystem has stereoscopic capabilities.

With respect to the Examiner's rejections of the claims based on the prior art (i.e. 35 U.S.C. § 102 and 35 U.S.C. § 103) the Examiner is invited to consider the following remarks.

The Tumer patent combines active (neutron activation) and passive (neutron scattering) methods to make measurements on light materials. It then expands this idea to a three-dimensional imaging device. The only described method for doing this in the Tumer patent is to use a computer. Information is reconstructed and displayed in a superimposed digital format. There is three-dimensional informational information, but not truly stereoscopic display involved with the Tumer patent. Through lines and anticipation of the shapes of objects, the viewer may judge the positions of things in space, but actually has no visual information regarding it through the displayed system.

This is contrary to the present invention as claimed in independent claims 1 and 7 wherein optically visible radiation images are superimposed on a view of the environment so that a user can obtain a 3-D view of the radiation by utilizing natural human stereo imaging processes. In other words, naturally human stereo imaging processes are used to get the stereo information. For example, the signal from one view is fed directly into one eye and the signal from the other view is fed directly into the other eye. In this way, the human visual system itself integrates the data or images into three-dimensions.

The U.S. Patent to Jeanguillaume does not make up for the deficiencies of the Tumer patent. The Jeanguillaume patent uses a more open collimator with a higher spacial resolution detector behind it. The higher spacial resolution detector is moved about to extract better spacial information while the more open collimator allows more photons to get through. Although it is not totally clear, the Jeanguillaume patent may deal with a form of blurring tomography or could be extended to that. The Jeanguillaume curved detector in feiber 11 is at a fixed geometry which enables a sorting of rays emerging from an angled collimation

system. The Jeanguillaume patent is further collimating a view from a single angle to dissect additional information. In other words, the Jeanguillaume device is used to extract better 2-D information.

The U.S. Patent to Ball, et al. superimposes infrared images onto the real world using a head mounted display. Two detectors are used, one for the visible signal and one for the infrared signal. However, no three-dimensional information is obtained. With Ball et al., simultaneous IR and visible views are obtained but these are only 2-D views.

The U.S. Patent to Monson, like the Ball et al. patent, involves a simultaneous display of different types of information to the viewer. In the Monson patent, a map with the visible environment is displayed. Here the viewer sees the real scene stereoscopically since the eyes will be viewing it from different angles. The map information gives clues to the 3-D locations of things to the use of angulation and shielding. However, true stereoscopic vision of the mapped information does not occur.

Consequently, in view of the above, it is clear that only the present invention as claimed provides optically visible radiation images superimposed on a view of the environment so that a user can obtain a 3-D view of the radiation by utilizing natural human stereo imaging processes. None of the prior art patents cited by the Examiner nor any of the prior art references of record or cited in the background art section of this application teach, disclose or discuss this claimed feature taken either alone or in combination with one another.

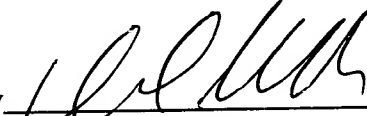
Consequently, in view of the above and in the absence of better art Applicants' attorney respectfully submits the application is in condition for allowance which allowance is respectfully requested.

A check in the amount of \$460.00 is enclosed to cover the Petition fee. Please charge any additional fees or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 02-3978 -- a duplicate of this paper is enclosed for that purpose.

Respectfully submitted,

**Clair J. Branch-Sullivan, et al.**

By



David R. Syrowik

Reg. No. 27,956

Attorney/Agent for Applicant

Date: May 9, 2002

**BROOKS & KUSHMAN P.C.**  
1000 Town Center, 22nd Floor  
Southfield, MI 48075  
Phone: 248-358-4400  
Fax: 248-358-3351

Attachment



**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**In The Specification**

Delete the old title and insert therefore the new title.

[METHOD AND SYSTEM FOR HIGH-SPEED, 3D IMAGING OF  
OPTICALLY-INVISIBLE RADIATION AND DETECTOR AND ARRAY OF SUCH  
DETECTORS FOR USE THEREIN]

METHOD AND SYSTEM FOR HIGH-SPEED, 3D IMAGING OF  
OPTICALLY-INVISIBLE RADIATION